Mouse Events

Where did the user click?

```
from graphics import Canvas


def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```

```
def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```

```
def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
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    print(click_x_coord, click_y_coord)
```
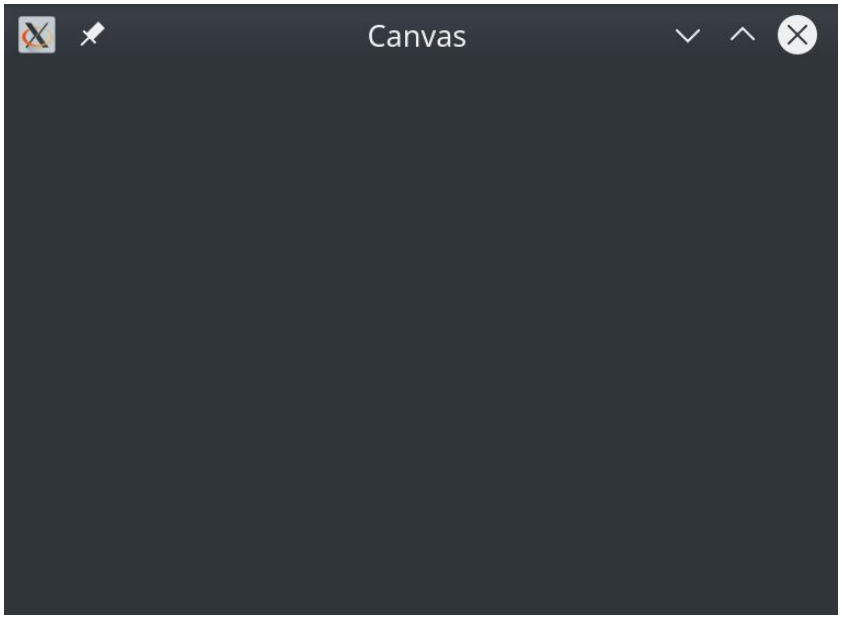
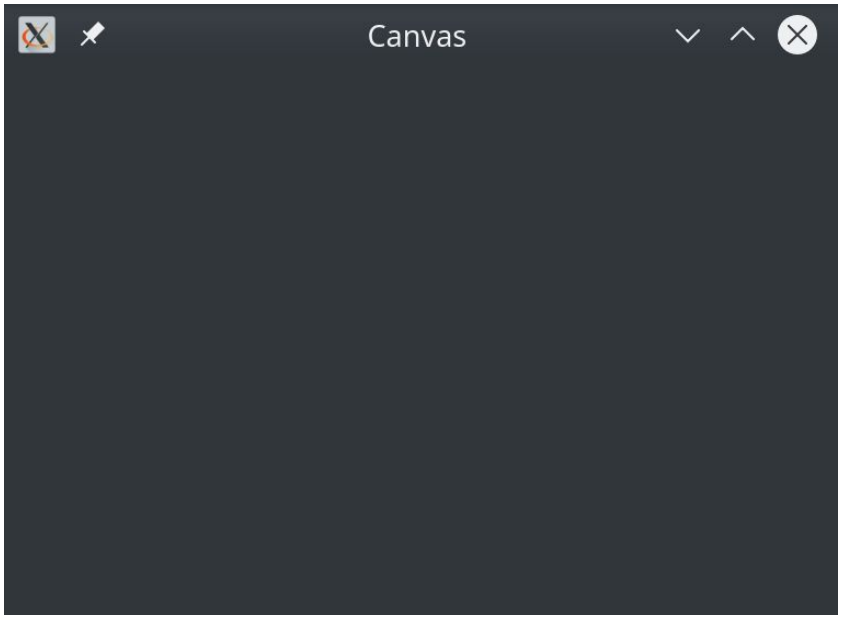
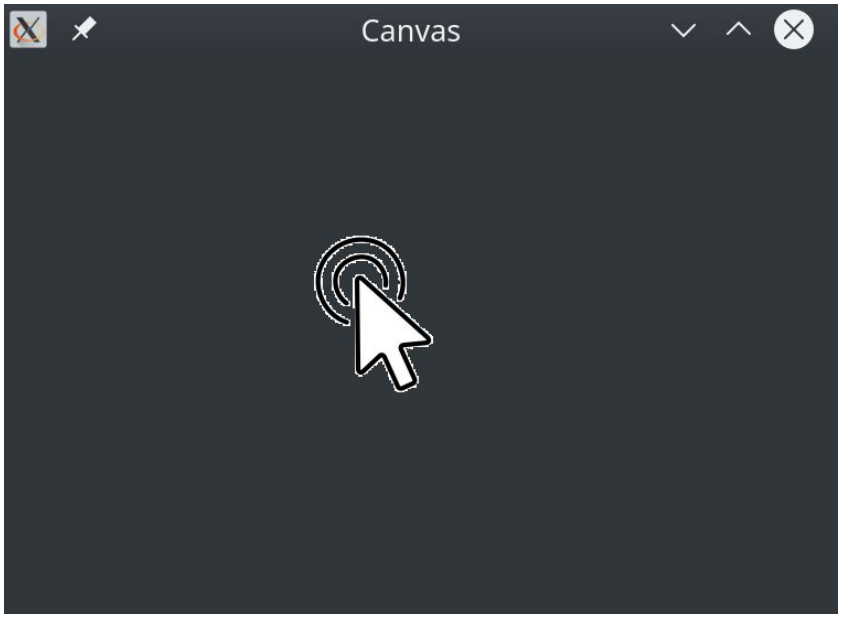



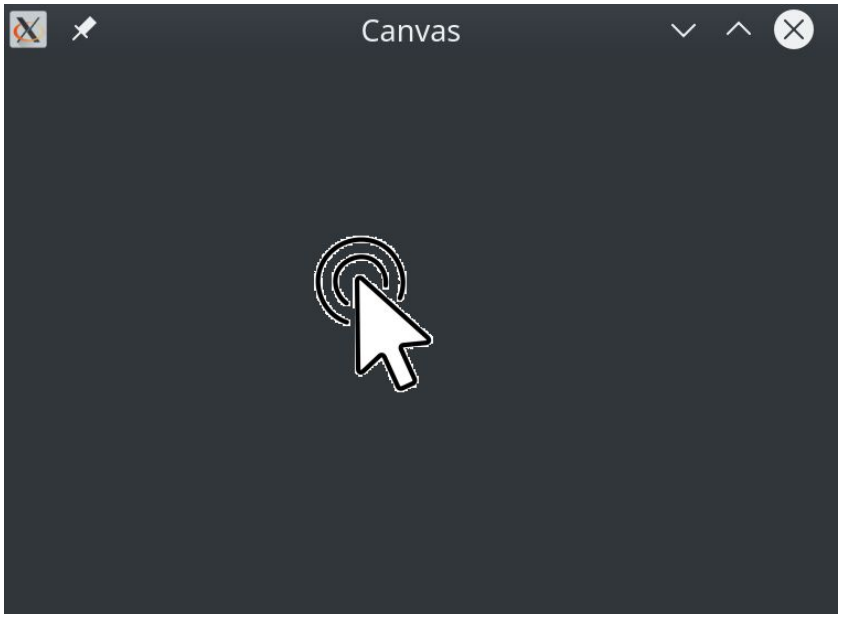
```
def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```



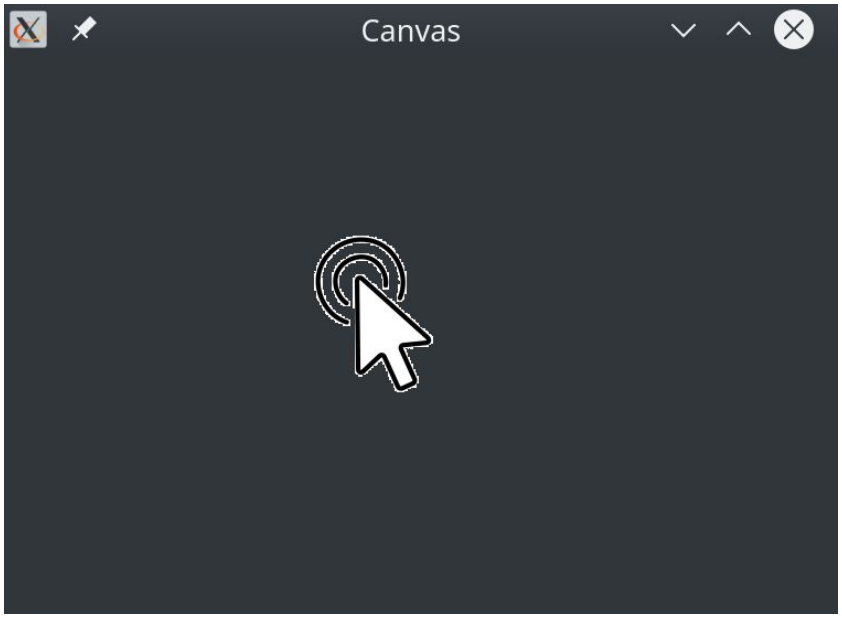
```
def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```



```
def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```



```
def main():
    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```



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    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
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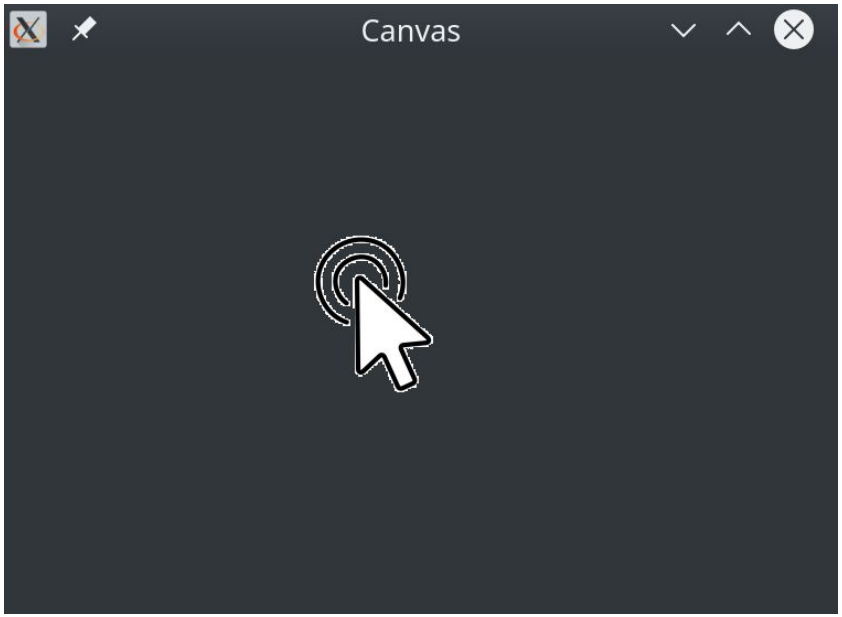
    print(click_x_coord, click_y_coord)
```



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    canvas = Canvas()

    canvas.wait_for_click()

    click_x_coord = canvas.get_mouse_x()
    click_y_coord = canvas.get_mouse_y()

    print(click_x_coord, click_y_coord)
```
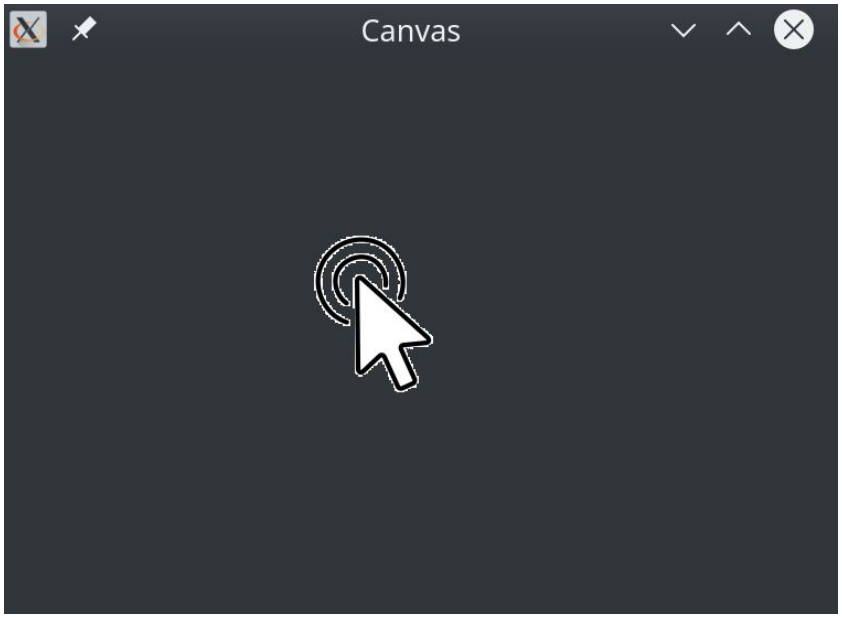
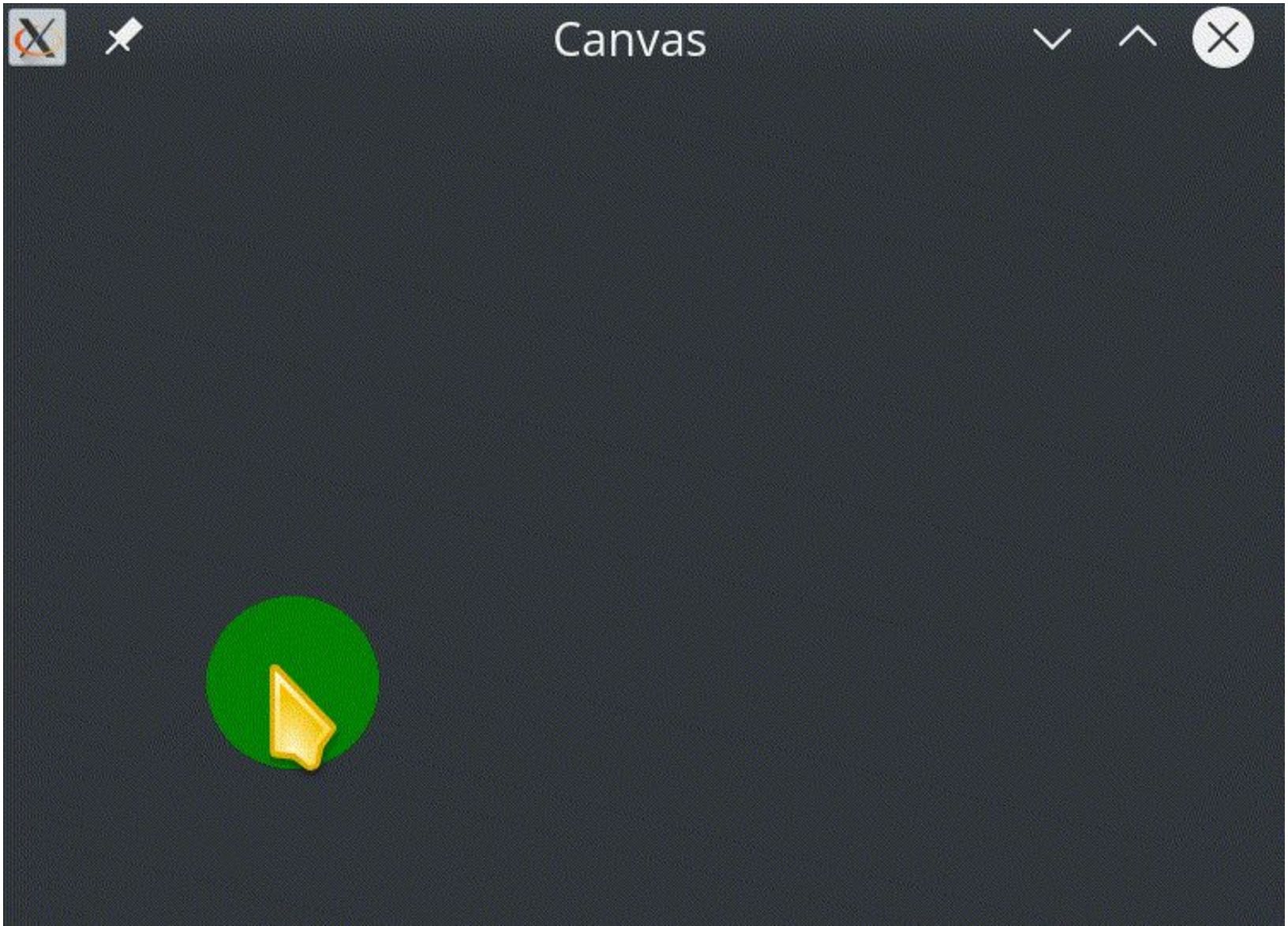
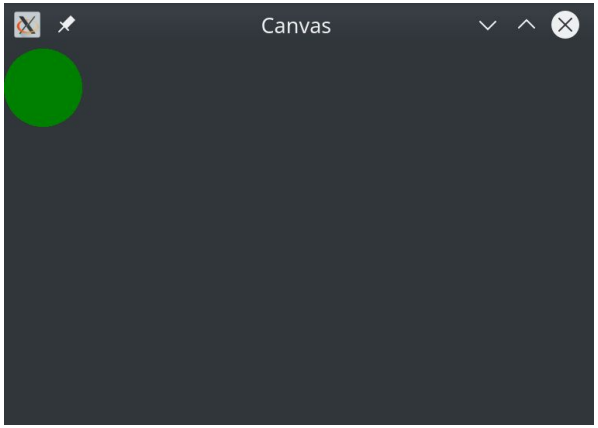




```
281 157
```

Mouse animation



```
from graphics import Canvas

DIAMETER = 100


def main():
    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    canvas.mainloop()
```



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    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    canvas.mainloop()
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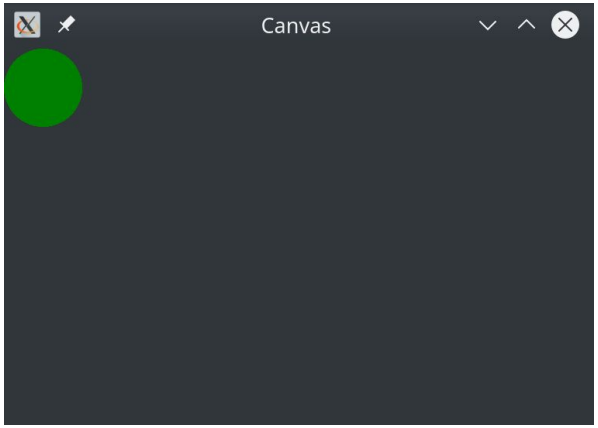

How to keep the circle follow the cursor?

```
from graphics import Canvas

DIAMETER = 100


def main():
    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```

```
from graphics import Canvas

DIAMETER = 100


def main():
    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
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    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
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        canvas.update()
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from graphics import Canvas

DIAMETER = 100


def main():
    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```
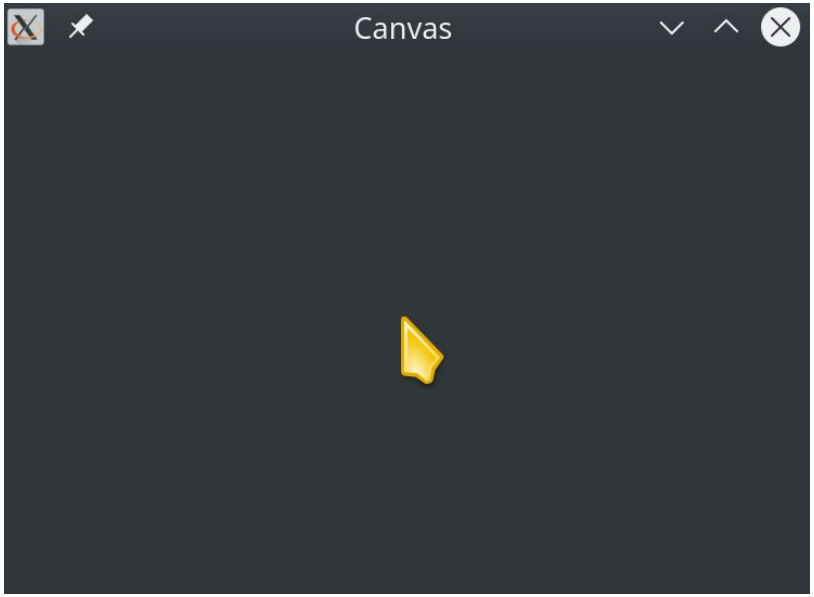
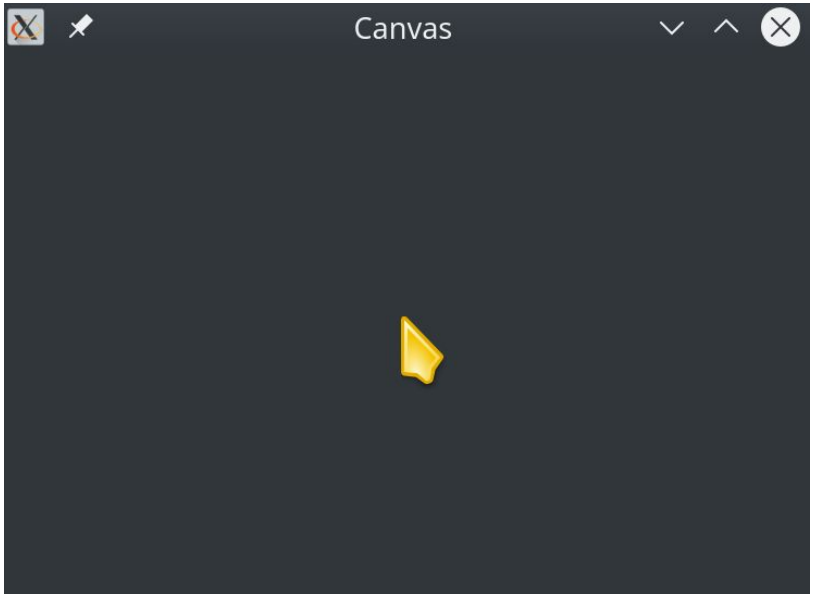
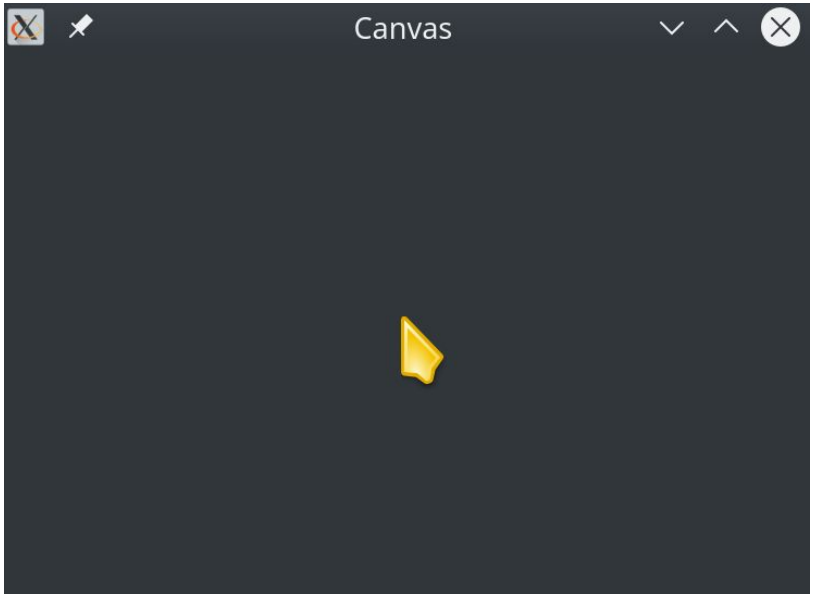

```
def main():
    canvas = Canvas()  canvas: .!canvas
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



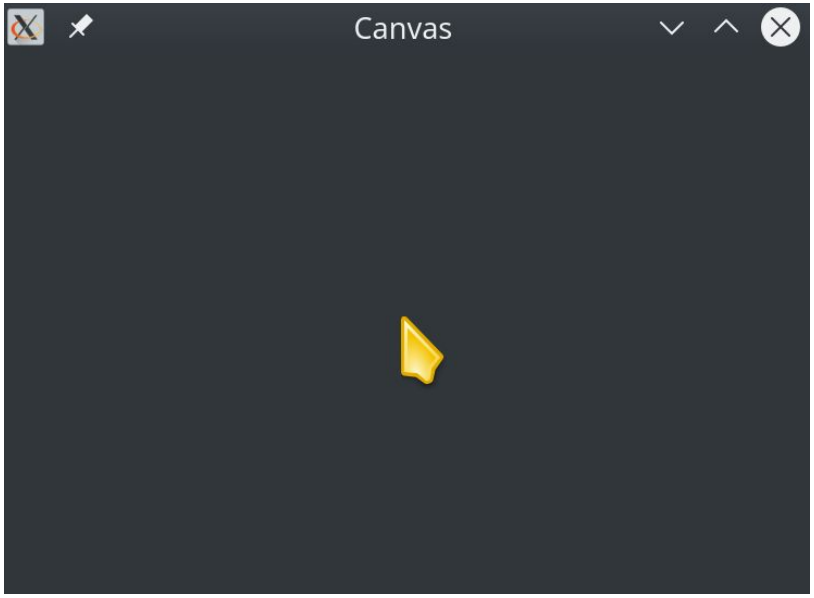
```
def main():
    canvas = Canvas()  canvas: .!canvas
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 347
        cursor_y = canvas.get_mouse_y()
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



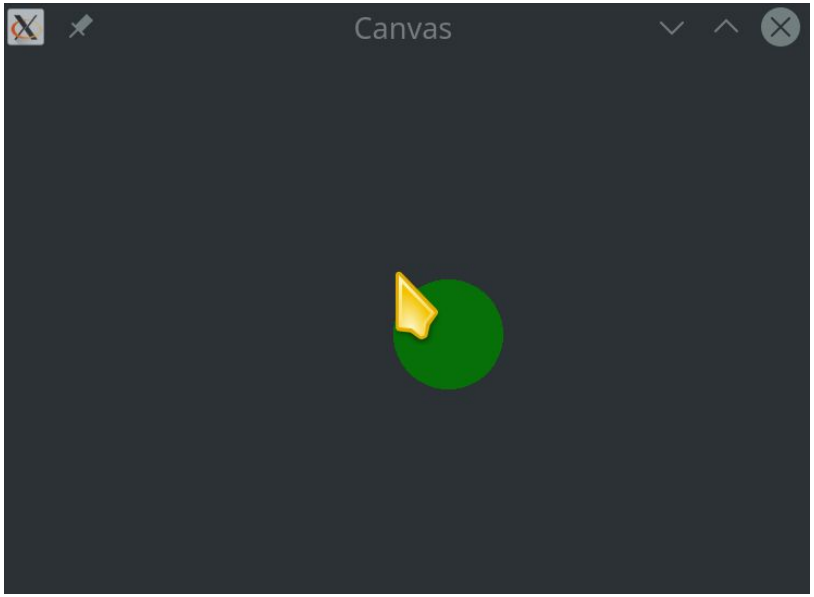
```
def main():
    canvas = Canvas()  canvas: .!canvas
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 347
        cursor_y = canvas.get_mouse_y()  cursor_y: 226
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



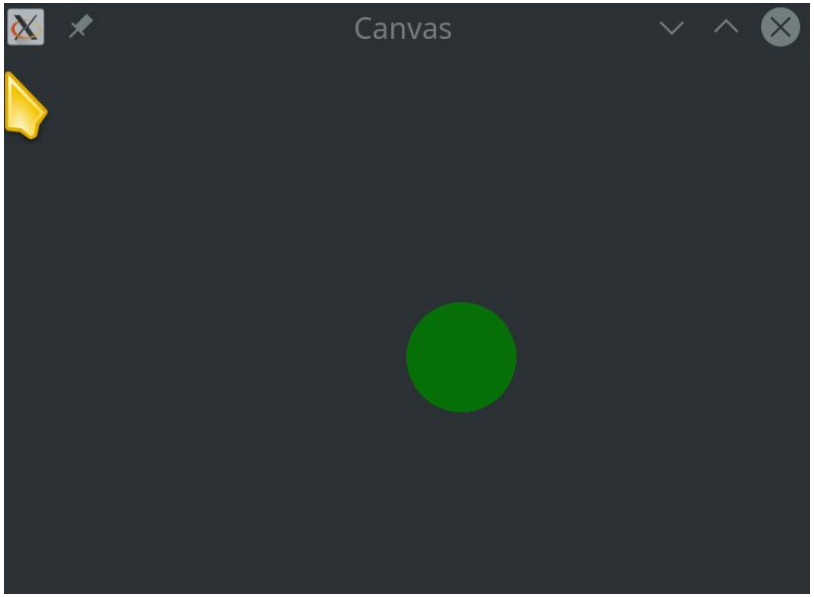
```
def main():
    canvas = Canvas()  canvas: .!canvas
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 347
        cursor_y = canvas.get_mouse_y()  cursor_y: 226
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



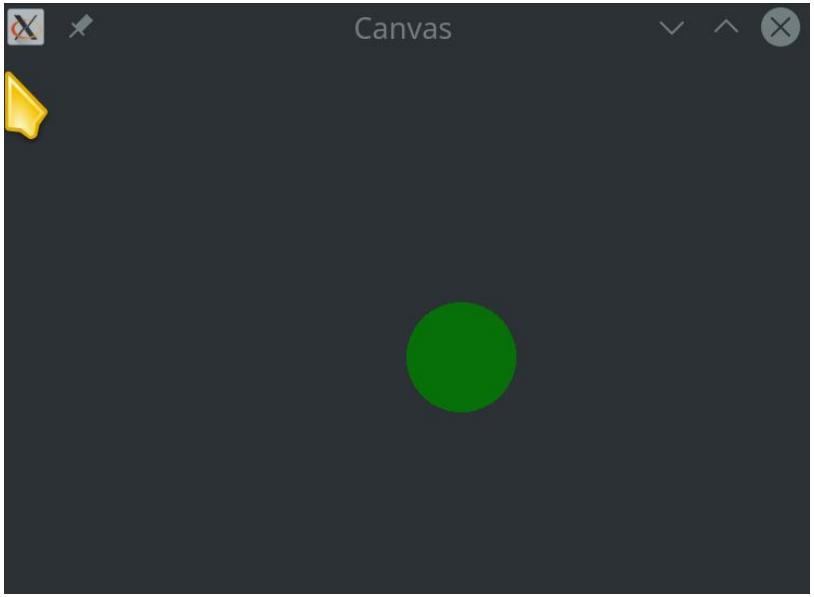
```
def main():
    canvas = Canvas()  canvas:
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 347
        cursor_y = canvas.get_mouse_y()  cursor_y: 226
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



```
def main():
    canvas = Canvas()  canvas: .!canvas
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 9
        cursor_y = canvas.get_mouse_y()  cursor_y: 226
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



```
def main():
    canvas = Canvas()  canvas:
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 9
        cursor_y = canvas.get_mouse_y()  cursor_y: 8
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



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def main():
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    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
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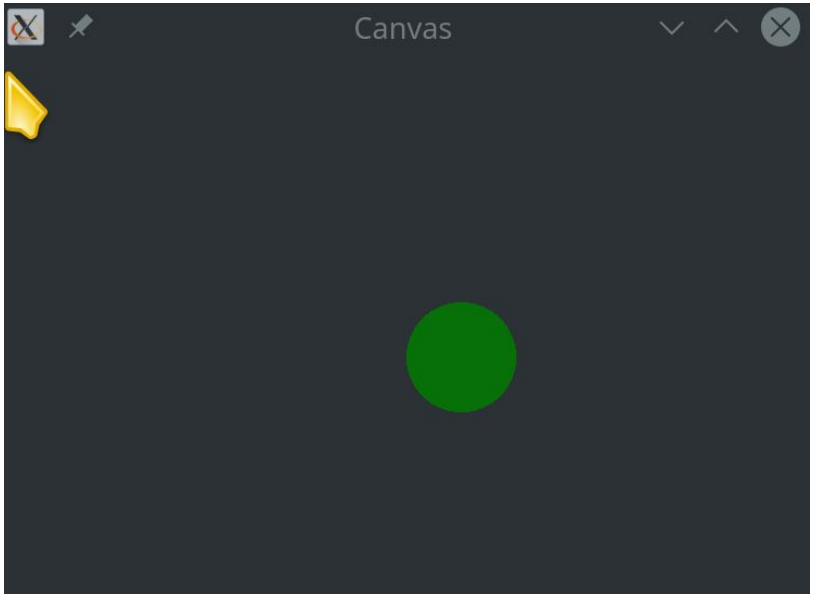
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 9
        cursor_y = canvas.get_mouse_y()  cursor_y: 8
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```



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def main():
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    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()  cursor_x: 9
        cursor_y = canvas.get_mouse_y()  cursor_y: 8
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```
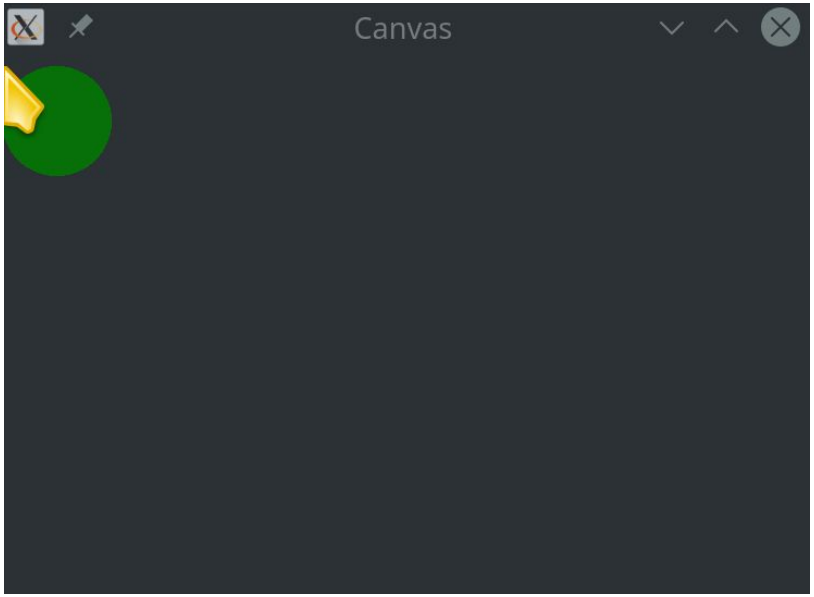
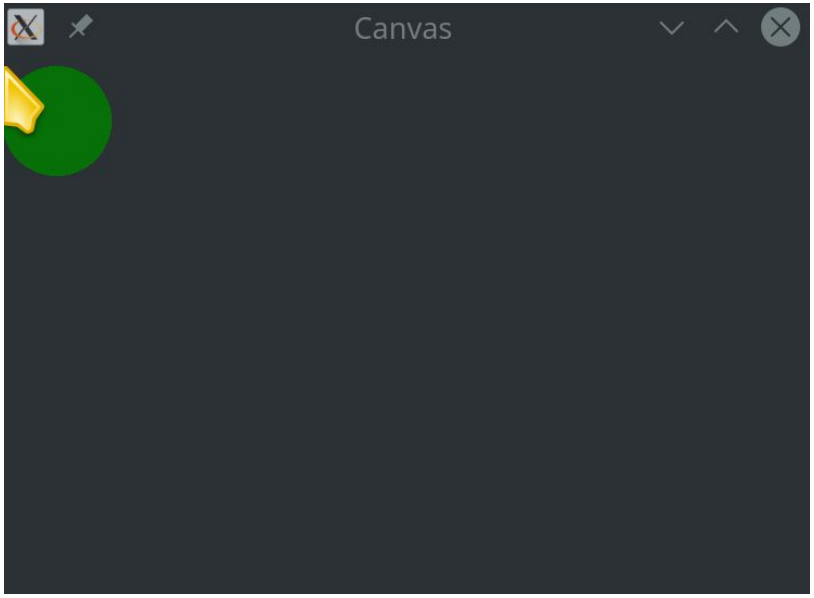
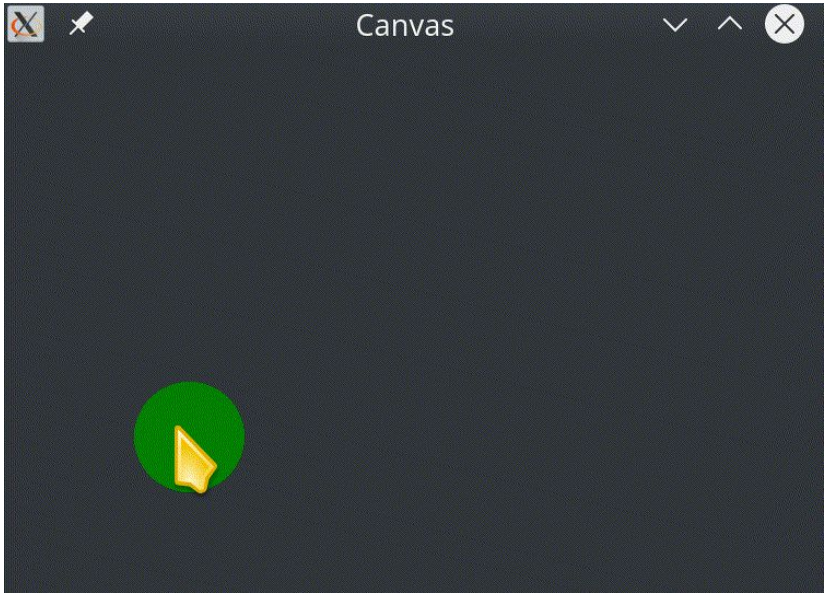
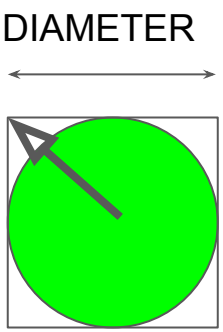



```
def main():
    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
        canvas.move_to(circle, cursor_x, cursor_y)
        canvas.update()
```

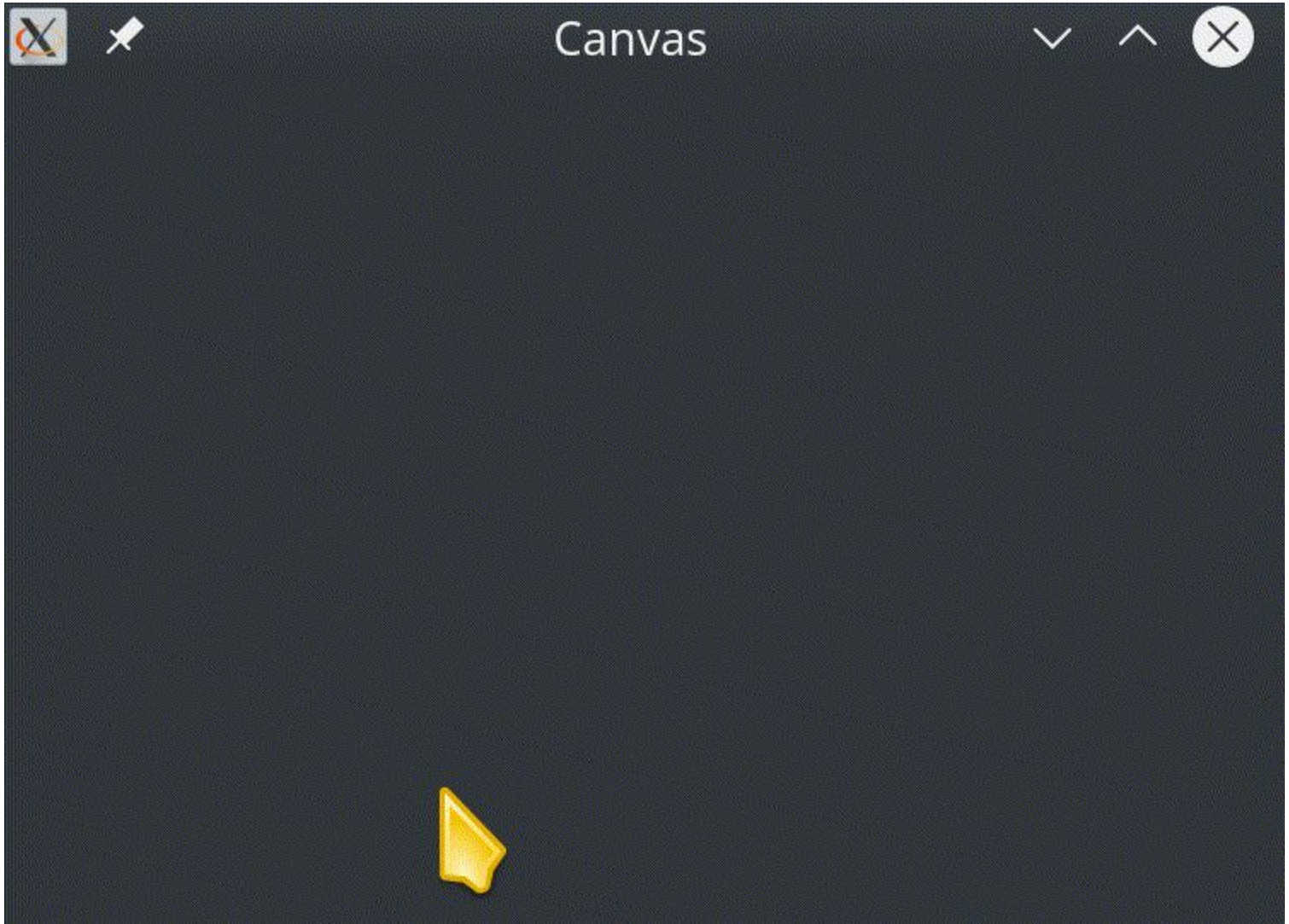




```python
from graphics import Canvas

DIAMETER = 100


def main():
    canvas = Canvas()
    circle = canvas.create_oval(0, 0, DIAMETER, DIAMETER)
    canvas.set_color(circle, 'green')
    while True:
        cursor_x = canvas.get_mouse_x()
        cursor_y = canvas.get_mouse_y()
        canvas.move_to(circle, cursor_x - DIAMETER / 2, cursor_y - DIAMETER / 2)
        canvas.update()
```

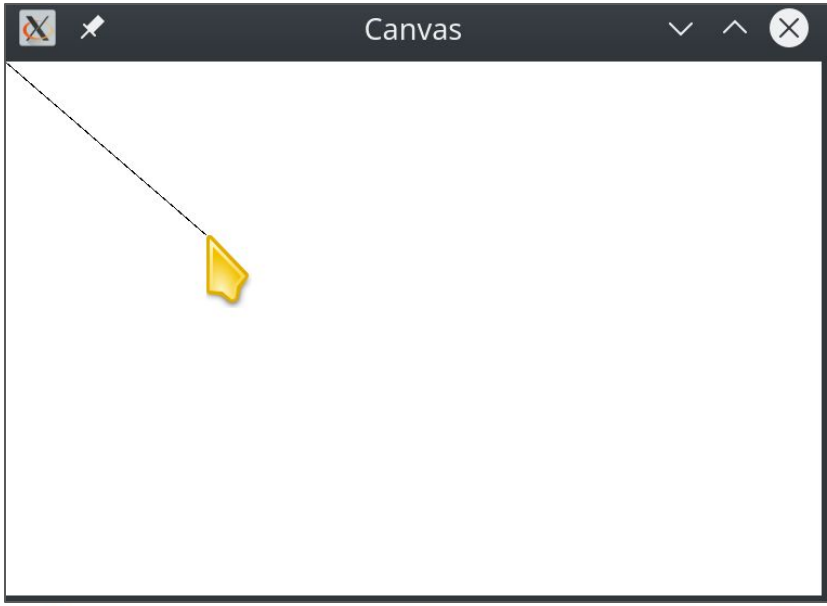


One line drawing

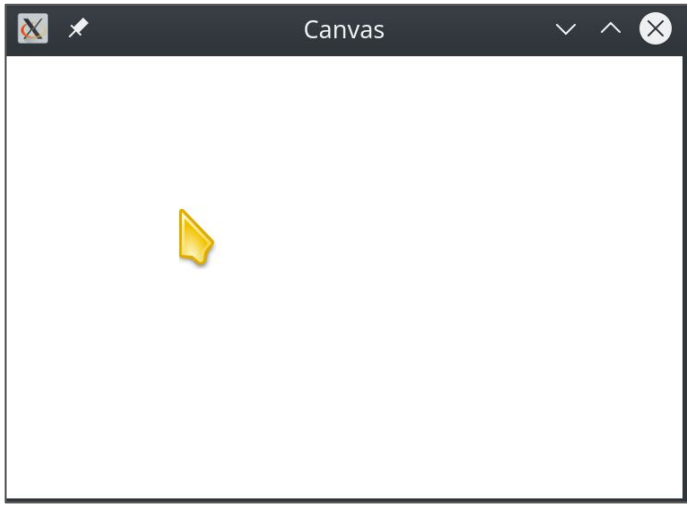


```python
from graphics import Canvas


def main():
    canvas = Canvas()
    canvas.set_canvas_background_color('white')

    previous_x = 0
    previous_y = 0

    while True:
        canvas.wait_for_click()
        current_x = canvas.get_mouse_x()
        current_y = canvas.get_mouse_y()

        canvas.create_line(previous_x, previous_y, current_x, current_y)
        canvas.update()

        previous_x = current_x
        previous_y = current_y
```

```python
from graphics import Canvas


def main():
    canvas = Canvas()
    canvas.set_canvas_background_color('white')

    previous_x = 0
    previous_y = 0

    while True:
        canvas.wait_for_click()
        current_x = canvas.get_mouse_x()
        current_y = canvas.get_mouse_y()

        canvas.create_line(previous_x, previous_y, current_x, current_y)
        canvas.update()

        previous_x = current_x
        previous_y = current_y
```

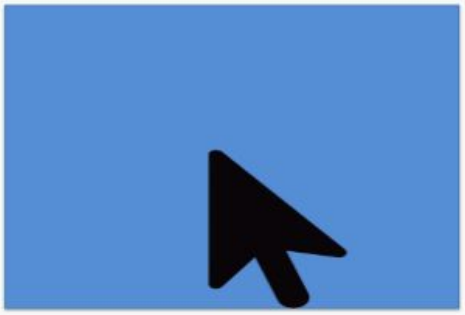


```
def main():
    canvas = Canvas()
    canvas.set_canvas_background_color('white')
    previous_x = -1
    previous_y = -1

    while True:
        canvas.wait_for_click()
        current_x = canvas.get_mouse_x()
        current_y = canvas.get_mouse_y()

        if previous_x >= 0:
            canvas.create_line(previous_x, previous_y, current_x, current_y)

        canvas.update()

        previous_x = current_x
        previous_y = current_y
```



Day 7: Mouse and Lists

Morning Project [here]



Mouse Location

Quickstart

SL Notes

Mouse

Making Tracks

Project

SL Notes

Mouse